

## PHASE-CONTRAST MICROSCOPE

|                     |                              |
|---------------------|------------------------------|
| Patent Number:      | JP7261089                    |
| Publication date:   | 1995-10-16                   |
| Inventor(s):        | ISHIYAMA, YUTAKA, others (1) |
| Applicant(s):       | OLYMPUS OPTICAL CO. LTD.     |
| Requested Patent:   | JP 1994-006389               |
| Application Number: | JP 1994-0063819, 1994-00624  |
| Priority Number(s): |                              |
| IPC Classification: | G02B21/00, G02B21/14         |
| ED Classification:  |                              |
| Equivalents:        |                              |

## Abstract

**PURPOSE** To provide a phase-contrast microscope which can be switched over between phase-contrast images in two dark-contrast and bright-contrast states under the same observations conditions accompanied by none of eccentricity, rotation of a deflecting plate, etc., in the optical system constituting the phase-contrast microscope.

CONST. TUTION. A phase ring 4 is arranged at the pupil position of an image formation optical system 3 in a conjugate position in relation to a ring slit 2 arranged at the pupil position of a lighting optical system 1 through a sample surface. The phase ring 4 is constituted by clamping both the surfaces of an element of liquid crystal, etc., which electrically which varies in phase difference quantity, with nearly transparent electrodes. When a sample 5 arranged on the sample surface is observed through this phase-contrast microscope by a phase difference method, an electric state applied to the electrodes (impressed voltage) is adjusted by a liquid crystal controller 6 to vary the phase difference quantity of the phase ring 4, and the phase-contrast images in the two bright-contrast and dark-contrast states are switched and observed.

Data supplied from the **esp@cenet** database - 12